



# ***Designing for Impact III:*** **Workshop on Building the National Network for Manufacturing Innovation**

ADVANCED MANUFACTURING NATIONAL PROGRAM OFFICE

## **Dialogue 3 Backgrounder:** **Summary of Input Offered at Prior *Designing for Impact* Workshops**

### **Strategies for Sustainable Institute Operations**

#### **1. How should initial funding co-investments of the Federal government and others be organized by types and proportions?**

It was common to attempt allocations of federal funding, such as (but not limited to): 2/3 R&D, 1/6 industry, 1/6 educational outreach; 50% equipment and facilities, 30% students and training, 20% strategic hires; 50% industry and 50% government. There was a desire expressed to limit overhead to 20%, and to avoid bricks and mortar investments. The suggestion was made to fund part-time sabbaticals to enable industry to work in academia and vice-versa. The Institute should also request machines and equipment to be donated.

Assessment measures included the number of new products created, and the increase in the manufacturing section of the US balance of trade.

#### **2. What arrangements for co-investment proportions and types could help an Institute become self-sustaining?**

Self-sustainability was discussed at length, with recommendations of fostering industry presence by gradually decreasing federal funding on projects to allow SMEs to join activities with an incentive to invest later. Sustainability requires generation of funding, which can be done by collecting membership fees; by encouraging investment by allocating percentage of IP ownership with investment; and funding from revenues and royalties associated with IP. The National Nanotechnology Initiative, the Fraunhofer Institute and the STAR agency for Science, Technology, and Research were references as useful models for co-investment.

#### **3. What measures could assess progress of an Institute towards being self-sustaining?**

It was expressed that the IMIs need to be hands-on and one step ahead of industry; in other words, a place where stakeholders can get work done more effectively than they would on their own. Measures to assess the progress of an Institute could include the growth in the number of industry members over time, particularly small and medium-sized businesses, the number of early members that reinvest, the IP licensing revenue, the development of new products and/or processes, or the Institute's income compared to recurring expenses.

#### **4. What actions or conditions could improve how Institute operations support domestic manufacturing facilities while maintaining consistency with our international obligations?**

Prior to accepting a project, the IMI could review each business plan to see where the company plans to manufacture, and charge higher licensing fees for manufacturing performed abroad, and/or could offer right of first refusal for domestic manufacturing. Workshop participants noted the supply chain as a key determining factor in domestic manufacturing and noted that the IMIs could serve as a source to help fill gaps in the supply chain and help manufacturing for these technologies become more sustainable in the U.S.

Turn to continue

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## 5. How should Institutes engage other manufacturing related programs and networks?

Manufacturing programs and networks should be engaged by helping companies overcome and eliminate bottlenecks in the supply chain, helping companies move from TRL or MRL of 4-7 to 8-10, and identify partners to solve multi-disciplinary challenges. Some workshop participants also suggested that NNMI critically evaluate all existing manufacturing programs and networks to see whether they successfully increase TRL for basic research, generate revenue through IP, or provide significant cost savings to the government.

## 6. How should Institutes interact with state and local economic development authorities?

IMIs could offer a tax rebate or other tax incentives to promote collaboration with state and local economic development authorities. The state and Institute should have a strong partnership to create a strong strategy toward cluster building and incubators. SSTI ([www.ssti.org](http://www.ssti.org)) could be a useful resource to engage states and coordinate efforts. In addition, these local and regional organizations can help attract new manufacturers to the region who are symbiotic with the technology focus of the Institute. One participant suggested that a formal process be established to allow states to discuss their needs with the Institute. A searchable database could help people identify initiatives relevant to their needs and avoid duplication of efforts.

## 7. What measures could assess Institute contributions to long term national security and competitiveness?

Several measures can be used to evaluate Institute contributions to national security and competitiveness, including the following:

- Institutes create new markets, techniques, products (e.g., could be measured by awards)
- Institutes address and overcome pain points in industry
- More technologies are manufactured in the U.S.
- More technologies are developed for federal acquisition programs (DoD, DOE, NASA, etc.)

In addition, IP licenses could be limited to domestic use.